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THE ROLE OF INDIGENOUS SMALL-MEDIUM SCALE ENTERPRISES IN THE SOCIO-ECONOMIC TRANSFORMATION AND DEVELOPMENT IN AFRICA

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I. INTRODUCTION

1.1 Background

1 As part of the recommendations and decisions of the second session of the Joint Conference of African Planners, Statisticians and Demographers, which was held in Addis Ababa, in March 1982, the Conference requested the ECA secretariat to undertake a study on the role of Indigeneous Small and Medium Scale Enterprises (SMEs) in the Process of Socio-Economic Transformation and Development in Africa 1/. The study which has been carried out under Project No. 9.243.02, is submitted to this third Session of the Joint Conference in compliance with the directives of the second Session.

1.2. Nature and organization of the study

2. Initially, the study was intended to be an indepth field research on major aspects of development of these types of activities in Africa, supported by concrete case studies of selected African countries which would have provided evidence of actual problems encountered in the areas of organization, management, financing, technical assistance, the development of local entrepreneurships, etc. However, the lack of statistical information and financial resources to conduct on-the-spot country investigations has constrained the extent of the study. It is now a desk research paper aimed at highlighting the significance of the contributions of SMEs in the process of socio-economic transformation and development in Africa and to provide a set of policy measures and recommendations to be adopted by African governments which would create the requisite investment climate for the development of such enterprises.

3. The study is organized as follows: in section 2, the study deals with the rationale for the establishment of small-medium scale enterprises in Africa within the context of the African industrial development strategy and examines the employment generation effects and the role of such enterprises in the transformation and integration of the subsistence sector into the monetized economy. The characteristics, conceptual and definitional problems are reviewed in section 3 with the introduction of the "informal sector" as a vehicle for increased employment opportunities and the need to ensure its viability and steady growth. Section 4 gives general overview of the current status and level of development of small-medium scale enterprises, areas where such enterprises have a comparative advantage in terms of substantial contribution to value added of total output, and a brief survey of the major constraints impeding the development of SMEs in the African region. Finally, in section 5, a set of policy measures and recommendations is offered on the necessity of integrating

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1/ See "Report of the Second Session of the Joint Conference of African Planners, Statisticians and Demographers" - E/ECA/CM.9/22 - paras. 185 and 189.

programmes, strategies and policies for the development of SMEs into the national industrial development plans and vital areas of government assistance programmes such as the establishment of appropriate infrastructural facilities, financial assistance, choice and adaptation of appropriate technology and the development of a cadre of indigenous entrepreneurship.

Section 2. Rationale for the establishment of small-medium scale enterprises in Africa

2.1 Overview of Africa's industrial development strategy

4. In recent years, the ECA annual reviews of social and economic conditions in African countries, have revealed, among others, two major constraints in the development process in the Region, i.e. the slow growth of the industrial sector and the lag in the integrated development of rural areas where approximately 80 per cent of the population live. Africa is the least industrially developed of all developing regions and least physically integrated with lack of adequate structural patterns and factor inputs which are prerequisites for self-sustained industrialization. Indeed, Africa's share in world industrial production was around 0.6 per cent in 1975 as compared to 4.1 and 6.4 per cent for Asia and Latin America, respectively in the same year. In 1981, the average share of manufacturing in gross domestic product was only 9.6 per cent for a sample of 26 African countries. The average annual growth rate of manufacturing sector for developing Africa as a whole was approximately 4.6 per cent recorded during 1979-1981, which is far below the 8 per cent target of the third international development strategy.

5. The industrial sector in African countries is predominantly foreign controlled and in some cases a total absence of indigenous entrepreneurial participation in major economic activities. This dominance of foreign investment has resulted in the present structure of existing enterprises which are mainly foreign owned capital-intensive establishments, medium size assembly and processing plants of labour-intensive character but utilizing sophisticated technology, and other large scale operations, particularly in mining which are heavily dependent on external sources for raw materials and other intermediate inputs. On the other hand, commercial establishments of any significant size, in terms of relative contribution to the development process, are owned, controlled and managed by non-Africans. Also, as a result of investment incentive schemes in most African countries, a substantial number of medium-size light industries enterprises had developed during the 1970s substantially backed by foreign private investment.

6. Parallel to this industrial and commercial structure, economic activities in most African countries are made up essentially of very small productive units using rudimentary technology covering such areas as artisans and craft industries with predominantly manual operations and semi-skilled marginally employed producers of crude consumer goods. Other important activities are categorized under the "informal sector"

(ILO, 1972) which includes self-employed artisans, shoe-makers, vehicle repairs, petty traders, street hawkers, newspaper vendors, barbers, food kiosks, etc. 1/.

7. It is in this spectrum of industrial and commercial activities that small and medium scale enterprises are prevalent, the development and/or strengthening of which would play a decisive role in the overall economic growth and development of African countries.

8. The Lagos Plan of Action and the Final Act of Lagos laid down the basic framework for Africa's industrial development in the long-and medium-term which has been elaborated in a detailed programme for the industrial development decade for Africa and provides a set of guidelines for the formulation of strategies for major industrial subsectors and the modalities for the implementation of the decade programme. The Decade programme explicitly recognises that one of the fundamental requirements of the Lagos Plan of Action for achieving industrial development in Africa is that of "... creating a network of small- and medium-scale industries, as well as actually promoting and encouraging the informal sector" 2/.

9. The rationale for the creation of such a decentralized network of small- and medium scale enterprises in Africa is dependent on a combination of several socio-economic factors. It would have been appropriate to examine these factors in the context of a general developmental model favouring the SMEs, but the usefulness of such an approach is limited because of the differentiated economies and social structures and even more important, the heterogenous political orientation, of African countries. Nonetheless, a selected range of factors would suffice to demonstrate the rationale for the establishment of SMEs in Africa as recommended in the Industrial Development Decade Programme.

2.2 The role of SMEs in employment creation

10. One should start with the recognition that the average annual growth rate of population far exceeds the growth rate in GDP in most African countries. Because of the population pressure and the resultant growth in the active labour force, there is the need to devise strategies for the creation of productive employment opportunities. In contrast to the large scale operations in African countries (which are mainly outward looking enclave industries) small- and medium-size indegenous enterprises are usually labour intensive and as such they are an avenue for increased employment opportunities.

2/ Employment, incomes and equality: A strategy for increasing productive employment in Kenya (ILO, 1972).

3/ See "Programme for the Industrial Development Decade for Africa" prepared jointly by ECA, OAU and UNIDO - UN.ID/287 and "Lagos Plan of Action for the Economic Development of Africa, 1980-2000" - OAU.

11. To better appreciate the potential role of SMEs in the alleviation of Africa's employment problems, it is useful to view Africa's labour market in an analytical framework that distinguishes the following types of employment structures: (a) modern employment which includes labour employed in large-scale modern firms and organisations; (b) intermediate employment that includes labour in small-scale establishments, apprenticeships, and family workers in the formal sector (e.g. in registered shops); (c) the informal employment covering all self-employed and family workers in informal activities; (d) the unemployed doing no work with any type of compensation. Following this distinctions in the employment structures, it becomes immediately evident that a large bulge in the employment pyramid exists at the intermediate and informal employment level. Since majority of the economic activities of small-scale enterprises in Africa belong to this area it can be inferred that such enterprises could play a critical role in employing a bulk of Africa's active labour force.

12. Given the scarcity of employment data in general and those for small-scale and informal employment in particular, it is very difficult to illustrate the magnitude of labour absorption in the intermediate and informal sectors. However, two examples are given below in tables 1 and 2 to show the general importance of labour absorption by SMEs. Table 1 gives the share of employment by small-scale enterprises in manufacturing employment for Latin American countries grouped according to level of income. Table 2 gives the employment of small-scale enterprises for Zaire by industrial branch.

Table 1: Share of small-scale industry sector in employment, Latin America, 1960

	Share of SME in modern factory sector	Share of SME in total manufacturing
Group 1	26.3	16.6
Group 2	38.4	17.6
Group 3	50.1	12.7
All Latin America	31.5	16.4

Source: Small-scale Industry in Latin America.

Table 2. Distribution of permanently employed in small industries with volume sales less than 30,000 Zaires

Industry	Total employed	No. employed in SMEs	Share of SMEs
Food processing	17 [illegible]	[illegible]	5.6
Beverage and tobacco	[illegible]	113	[illegible]
Edible oils	[illegible]	706	3.4
Textiles	[illegible]	[illegible]	[illegible]
Clothing	[illegible]	[illegible]	[illegible]
Wood working	[illegible]	1 [illegible]	[illegible]
Furniture	[illegible]	[illegible]	[illegible]
Paper	[illegible]	[illegible]	[illegible]
Printing	[illegible]	[illegible]	[illegible]
Leather	[illegible]	[illegible]	0.7
Rubber	[illegible]	[illegible]	[illegible]
Chemicals	[illegible]	[illegible]	[illegible]
Petroleum	[illegible]	[illegible]	[illegible]
Non-metallic minerals	[illegible]	[illegible]	[illegible]
Metal products	[illegible]	[illegible]	[illegible]
Engineering works	[illegible]	[illegible]	[illegible]
Transport equipment	[illegible]	[illegible]	[illegible]
Others	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]

Source: Small-scale Industry of Zaire, vols. III and IV, EAIID April, 1975.

13. From Table 1 it can be seen that in Latin America small-scale enterprises absorb as much as 16.4 per cent of the entire industrial labour force as compared to 4.1 per cent for Zaire. Such a relatively low share of small-scale employment in total industrial employment for Zaire, which is exemplary of what exist in most African countries is an illustration of the low level of development of SMEs in Africa which could be a vital source for the creation of employment opportunities.

14. The development and country-wide dispersion of small and medium-scale enterprises could also contribute to (a) the equitable regional distribution of employment opportunities, and (b) the absorption of special categories of the population. The flexibility for small-scale enterprises to be located in many parts of a country creates an environment whereby employment opportunities can be widely spread within a country or a region including the rural areas. With respect to the absorption of special categories of the population, these enterprises could play an important role in the involvement of women and the handicapped in the development process.

2.3. Transformation and integration of the subsistence sector into the monetized economy

15. The inadequacies of the transport and communications infrastructural facilities, handicaps the distribution and marketing system in African countries and reinforces the dualistic characteristics of developing African economies i.e. - the monetized sector in which coexist, industry, mining, finance, insurance, trading and associated services and the 'subsistence' sector which is predominantly peasant agriculture, handicrafts and related activities. In most African countries farm-to-market roads are non-existent and most trunk roads are poorly developed, which makes the transportation of goods (urban-to-rural or vice versa) abnormally expensive. The location of small-medium size enterprises closer to the markets which they serve can increase the degree of monetization of the economy through organization of the distribution and marketing of goods and services, the creation of inter-linkage between the traditional agricultural areas and the industrial sector thereby enhancing the exploitation of economies of scale and optimum utilization of the development potentials of the African countries.

2.4. Increasing domestic production of basic goods and services

16. One of the fundamental objectives for the development of the small-medium-scale industries is to increase the local production of basic goods and services particularly those which are based on natural resources in abundant supply in African countries. The products of such enterprises could be channelled through wholesale traders and other distributors which will result in an expansion of the country's domestic trade. Such commercial interest will also induce the development of considerable indigenous expertise in marketing these products throughout the country.

2.5. Contribution to capital formation and savings for foreign exchange earnings

17. Another positive contribution of SMEs is that they are a potential source for increasing the level of savings and facilitation of domestic capital formation for increased investment activities. To encourage the development of small-scale enterprises in African countries would bring forth untapped and latent resources (capital, entrepreneurial and managerial talent, etc.) which would otherwise not be effectively available at all. These enterprises have little access to institutional financing and therefore rely heavily on personal savings and loans from relations. Such capital would never come into productive investment if the proper investment climate is not provided. In favourable economic conditions small entrepreneurs are inclined to save excess cash flow beyond the basic needs of their enterprises and families as evidenced by the spontaneous growth of informal savings clubs throughout Africa. Greater attention by policy-makers to encourage small-medium scale entrepreneurs to save excess returns could broaden the base for domestic resource mobilization which can be a vital source to finance small- and medium-scale enterprises.

18. Considered alongside with domestic productions, imports indicate an existing market and suggest opportunities for new industrial projects to satisfy a local demand. Most of the small and medium size enterprises are solely dependent on local sources for raw materials and other intermediate inputs, as opposed to large scale enterprises which import a bulk of their input requirements. The identification of potential areas of investment for small and medium scale enterprises can help in increasing import substitution possibilities and thus save the country's foreign exchange earnings which, otherwise, could have been spent for the import of the basic needs.

2.6 Development of indigenous technology

19. Another favourable argument for SMEs, is that technologies transferred from developed countries are not originally developed for the processing of local resources in the service of local needs in African countries and in many cases the appropriate indigeneous skills are not available for the adaptation of such technologies to local conditions. Besides, these technologies are expensive and constitute a major source of foreign exchange leakage from African countries. The development and/or strengthening of small- and medium-scale enterprises, therefore, would provoke the innovative abilities and ingenuity of local entrepreneurs to develop indigeneous technologies for the use of small-medium scale enterprises.

Section 3: Concepts, definition and characteristics of SMEs

3.1. General concepts and definition of SMEs. A brief review

20. A very delicate problem in economic research on small-medium scale enterprises in developing countries, and particularly so in Africa, is the basic conceptual difficulties that arises when one attempts at defining a small and/or medium size establishment. In Africa, the literature is not as vast as in the case of India or Japan, and a brief description or short systematic definition can do no justice to the great diversity that characterizes small-medium scale enterprises. The concept of SMEs varies according to the economic structure in general and the level of industrial development in particular, in individual African countries, because what may be seen as a small and/or medium size enterprise in Kenya, which is classified as an industrializing country with 22.1 per cent of value added in commodity production in 1976, could be a large scale operation in a non-industrializing country like Lesotho with a comparative 5.1 per cent of value added in commodity production in the same year 4/.

21. The very nature of the SMEs have made it difficult for systematic research to be conducted in order to throw light on the overall concept, characteristics, functions and responsiveness to changes in development policies.

4/ "Industrialization Indicators" - World Bank World Tables, 1976.

However, two favourable approaches have been devised over the years to alleviate the conceptual and definitional problems and these have increasingly found an in-road into the literature or country case studies on SMEs in few African countries.

22. One approach attempts at a functional definition by which SMEs are distinguished from large scale undertakings on the basis of suspected or proven characteristics. The main proponent of this concept is Eugene Staley 5/ who defines a small industry as that segment of manufacturing production which is carried out in relatively small establishments and this includes both factory and non-factory establishments. Non-factory establishments are household or cottage industries and workshop industry. As for the factory type, the distinction between small, medium or large is a matter of degree and it is here that Staley's functional characteristics become quite useful in the classification of enterprises in various sizes.

23. In this context, Staley points out that some of the suspected or proven functional characteristics of small scale enterprises should include: relatively little specialization in management, close personal contact of top management with production workers, customers, suppliers and owners; lack of access to capital through the Institutional Financing Systems, and difficulties to obtain short-term credit, no special bargaining strength in buying or selling, and a relatively close integration of the entrepreneur with the local community through local ownership and management and dependence on nearby markets and sources of supply. These characteristics are to a certain extent similar to those identified by the University of Ife in its research -programme on small scale industries in Nigeria.

24. In the case of medium scale enterprises, there is no particular characteristics that distinguishes such establishments from large scale operations except the level of capital investment, management structure and the size of the labour force, and the degree of utilization of power, all of which are dependent on the type of industry and the planned production capacities of such enterprises.

25. The other approach is to find some unobjectionable quantitative measure such as, employment; with or without the use of power; and capital equipment at some convenient valuation, etc.

3.2. Experiences of developing countries

26. In order to better illustrate the constraints and/or advancements in the application of both approaches in research programmes on small- and medium-scale enterprises in developing countries, we shall briefly examine below certain cases in the Asian, Latin American and African regions.

5/ Dr. Eugene Staley. "Small Industry Development (Research Programme on Small Industry Development - Miscellaneous Paper, No. 1 - December 1958.).

(a) Asia

27. With regards to the quantitative aspect of the definition of SMEs and some variant of the application of the functional approach in Asia, the experiences of India, which is classified as a newly industrializing country (NIC) and Japan, an industrialized market economy country of the OECD group, provide a useful guide in our analysis.

28. A glimpse at the Indian literature indicates that the concept and defnition of SMEs had gone through an extensive metamorphosis over the years. Between 1953-1960, the official Indian definition of a small scale establishment was those units with fewer than 50 employees, if motive power was used, or fewer than 100 if no motive power is used, with a fixed capital investment of 500,000 Rupees (approximately $US62,500). In 1960, the limitation on the number of employees was dropped and such enterprises were defined as those having 100,000 Rupees or less in initial capital investment and working as an auxilliary to large scale units producing components and parts on a sub-contractual basis. In 1966 the definition was found to be too restrictive and what was thought to be a more generic definition was adopted which considered small scale enterprises as comprising manufacturing units with a capital investment in plant and machinery not exceeding 750,000 Rupees 6/.

29. In Japan, the term small-medium enterprise is predominantly used and although there is no definite agreement on a standard definition amongst Japanese economists, it is generally used as an aggregate expression relative to the industry and the objectives of the researcher. However, a powstwar period definition of small-medium enterprise is an establishment employing less than or equal to 300 employees with capital outlay of 10 million Yen or less. In retail and wholesale business and service industries, the criterion of less than 30 employees prevails 7/. Moreover, a distinction is usually made between household industry,which is often referred to as petty business, and small-medium scale enterprises. A "petty business" is defined as a unit employing less than 10 persons in conjunction with the following attributes: strong characteristics of an individual enterprise; pre-modern management of business; inseparability of household and business; and high dependence on family labor.

(b) Latin America

30. Although there is no standard definition of what should be considered a small and/or medium-scale enterprise for countries in the Latin American Region, yet the basic criteria used by most of them consist of the level of employment, initial capital investment and to a certain extent, sales turnover 8/.

6/ "Small scale industries in India" - by the Development Commission, small-scale industries, New Delhi, 1967.

7/ H.Arizawa: On the controls of Japanese industry, 1937. Arizawa classified manufacturing factories as follows: (a) small factories (5 to 30 manual workers), (b) medium factories (30 to 100 manual workers), less factories (100-200 annual workers and larger factories (over 200 manual workers).

8/ See UNIDO: Small-Scale Industry in Latin America, New York, United Nations, 1969.

31. In Ecuador, small-scale enterprises are grouped under those types of activities in which the operation of the machines predominates over manual operations, and which are devoted to transforming raw materials or semi-finished goods into final and intermediate products. In conjunction with these characteristics, a small-scale enterprise is defined as an establishment whose initial capital investment, excluding land and buildings, is around 500,000 sucres (US$27,500); with employment in the range of 7-19 persons including administrative and sales staff; and a gross value of output of about 1 million sucres (US$55,000).

32. The Mexican definition of a small and/or medium size enterprise is an establishment whose capital is between 50,000 pesos (US$4,000) and 15 million pesos ($1.2 million).

33. The Ministry of Development in Venezuela defines a small-scale industry as an enterprise with an active capital of not more than 100,000 bolivas (US$22,727) and employing between 5 and 20 persons.

34. The above examples may not be representative of the Latin American Region, but a striking inference that could be drawn is that there is a marginal distinction between a small- and medium-scale enterprise in these countries.

(c) Africa

35. As has been pointed out earlier, the literature on small and/or medium scale enterprises in Africa, is not vast, nonetheless the few examples below is illustrative of the extent of the application of the two approaches in research programmes of certain international organizations and local institutions in few African countries.

36. In Nigeria, the Industrial Research Unit of the University of Ife 9/ defines a small-scale enterprise as one whose total assets in capital equipment, plant and working capital are less than N25,000 and employing fewer than 50 -fulltime workers with or without motive power. It may be a household, a cottage, a craft or a factory.

37. In Kenya, the operational definition of a small-scale enterprise are such industries with a total capital cost of less than KSH/ 5 million (approximately $380,000) 10/. Also, the concept of the informal sector has been extensively described and analysed in a case study by the International Labour Organization (ILO) in 1972, as an avenue for creating employment

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9/ Small-Scale Industries: Western State of Nigeria - by the Industrial Research Unit - Department of Economics, University of Ife, Nigeria, March, 1972.

10/ Small-Scale Industries and International Economic Co-operation: The Kenyan Experience - by R.M. Kaplinsky.

opportunities in Kenya. The study defines the informal sector to include self-employed artisans, shoe-makers, tailors, petty traders, street hawkers, newspaper vendors, caterers in [illegible] repairs and other maintenance workers etc.

38. In Peter Garlick's case study on [illegible] in Ghana, he concludes that the number of activities in the informal sector (as broadly defined above) constitutes the bulk of small-scale operations in urban and rural areas in particular, that majority of indigenous African business outside the agricultural sector are concentrated in what is called petty trade or "petty business" 11/

39. In the case of Ghana, a small-scale industry is defined as any unit whose control is within the capability of one people individually or collectively in terms of capital, material or know-how. This is a definition that is basic to the concept of self-reliance with a self-sustained internally located industrialization in African countries.

3.3 Proposed working definition of small or medium scale enterprises in Africa

40. On the basis of the above brief review of the conceptual and definitional problems of SMEs in developing countries including Africa, and in the context of the objectives of this paper, we shall attempt to offer a working definition of small [illegible] medium-scale enterprise suitable to what obtains in African countries. We shall use the functional definition (Eugene Staley, 1958) and the three dimensional quantifiable characters (employment, power and initial capital investment) in order to provide a framework for further research on SMEs in African countries.

41. In Africa, a small-scale enterprise can be defined as a unit employing up to 10 persons, with or without using motive power, with an initial capital investment of less than or equal to $10,000. Additionally, such units should possess all or some of these characteristics: the owner/proprietor supervising the financing, production, marketing and personnel of the enterprise; the entrepreneur finds it difficult to borrow short-term or long-term capital through organized financing institutions and so relies on relations, money lenders, personal savings or the profit of the enterprise; the enterprise is closely integrated with and meet only the immediate needs of the local community, having little knowledge and need of wider and distant markets; the establishment is generally weak, poorly equipped and reluctant to request or accept assistance for reasons of ignorance, prejudice or fear that information about the enterprise might reach the tax authorities or a nearby competitor; little or no account of business costs and revenue is kept, level of education of the proprietor is usually very low with a consequent low level of business management techniques, skills or market information.

11/ Peter G. Garlick: African Traders and Economic Growth - A Case Study in Ghana (In Gwyre [illegible] Schatz: Africa, South of the Sahara)

42. A medium size enterprise in Africa, can be defined as a modern manufacturing establishment (i.e. import substitute industries producing mainly durable and non-durable consumer goods) or a commercial entity (trading mainly in imported and/or locally produced manufactures). If it is a manufacturing unit, it could employ up to 250 employees, using active power with an initial capital outlay of up to US$ 500,000. With respect to commercial establishment, employment could be up to 50 people with capital investment of less than $US 100,000. These enterprises possess all or some of the characteristics of large scale enterprises in industrialized countries in terms of management functions (organizational structure, technology, specialization, etc. etc.)

Section 4 Small-and medium-scale enterprises in African industrial development

4.1. Overview of the role of small-scale enterprises in Africa's overall development

43. In view of the already identified significant potential contribution of small-medium scale enterprises to the overall development of African countries, it is surprising to note that ways in which governments can assist in their development have not been more intensively studied. However, as an eye opener, the programme for the industrial development decade for Africa stipulates that small and medium scale enterprises can contribute to: the generation of employment and income; the stemming of unwarranted rural-urban migration; the encouragement of using new, renewable and alternative sources of energy in rural areas; the generation of centres for the development of semi-skilled manpower; the development of the much needed indigenous entrepreneurial and industrial capabilities; the development of integrated and interlinked industrial development by increased subcontracting; the stimulation of growth of other sectors such as food and agro-based industries, building industries, transport and communications and energy; the establishment of broad-based development with the satisfaction of basic needs, more even income distribution patterns, fuller use of local resources and increased involvement of hitherto neglected parts of the broad masses, such as women.

44. The programme also identifies priority areas where small- and medium scale enterprises have a comparative advantage in the industrialization process of African countries:

(a) Food processing industries

45. In line with the first priority of the Lagos Plan of Action, the programme for the industrial development decade accords the highest priority to food processing industries. The essential strategy advocated by the programme is that food production, processing and marketing must be viewed as an integrated and interdependent system. In this respect it is rightly emphasised that the trend should be towards smaller-scale rather than

larger-scale processing units. Some specific areas include: (a) small bakeries, (b) small village-scale flour milling enterprises (c) small-scale dairy enterprises; (d) small-scale smoked and dried fish activities. If conscious efforts are made by governments to encourage and strengthen rural small-scale enterprises in such activities, it is obvious that African countries can benefit substantially in terms of increased value added, reduced food wastage and increased food production.

(b) Textile industries

46. Textile is one of the major basic needs and as such it is one of the four sectors in which the industrial development decade for Africa aims at achieving self-sufficiency by 1990. In terms of the possible role that small-scale enterprises can play in this sector it is envisaged that at least for those countries that have a domestic supply of raw cotton, there is a lot of potential for successful import substitution and even export promotion activities. This fact is clearly illustrated by the experience of Ethiopia where out of a total value added of ETB 108.9 million in 1978/79 by all small-scale handicraft co-operatives, as much as ETB 106.6 resulted from textile activities like tailoring, weaving and embroidery. In the West African countries where cloth-dyeing is widespread, value added by small-scale enterprises engaged in such activities is also quite significant. Similarly in the case of Mauritius out of a total of of 3,520 small enterprises (employing less than 10 workers) over 1 300 enterprises were involved in tailoring and weaving apparels.

(c) Forest-based industries

47. Wood-based products range from simple logs for firewood and charcoal to complex chemical products like viscose rayon fibres. Activities that could be undertaken by small-scale enterprises include: simple transformation of wood into products used for building; saw mills and wood-based panel mills; furniture; and small-scale charcoal production units. In some areas wood carvings have also been very important small-scale products especially for exports.

(d) Clay-based products

48. Perhaps one area in which the very important role of small-scale enterprises has not been fully appreciated in Africa relates to clay-based products. In this subsector one finds products that lend themselves easily and profitably to small-scale enterprises. For example brick making for rural development can be a very lucrative activity for rural small-scale entrepreneurs. Pottery and other ceramic products are other examples.

(e) Metallurgical industries

49. Although the metallurgical industry is usually seen as capital and technology-intensive, it has to be acknowledged that in many African countries,

small-scale enterprises have played a leading role in the manufacture and repair of basic metal products. In many countries the indigeneous agricultural implements, cooking stove and small parafin lamps, knives based on metal works are produced by the informal sector. Although the value-added by these enterprises is often evaluated as little, it is crucial to note their critical role is in the provision of basic implements for subsistence farmers and other basic necessities for the rural population.

4.2. The level of development of small-scale enterprises in Africa

50. The origins of small-scale enterprises in Africa particularly handicrafts and the informal activities, can be attributed to the cultural and economic environment of most African countries in the pre-colonical era. However, the proper formulation and organisation of programmes of small-scale enterprises is only a recent post-independence phenomenon. Thus, in making a thorough assessment of the present level of development of small-scale industries in African countries, it is imperative to assess: (a) to what extent the specific programmes have been effective in organising and developing the small-and medium-scale enterprises; (b) how much have SMEs developed in Africa in comparison to other developing regions and what actual contributions such enterprises have made to the development process in African countries.

(a) The organisational structure for mall-scale enterprises

51. The structure of programmes for small-scale enterprises in Africa varies from a small and isolated department in the Ministry of Industry and/or commerce to a large and integrated organ or office specifically for small scale enterprises. To illustrate the different organizational structures and the level of development these have brought about for small scale enterprises, a few country examples are outlined below:

(a.1.) Tanzania - The small industry development organisation (SIDO)

52. The Small Industry Development Organisation (SIDO) in Tanzania was a result of the reorganization in 1973 of the National Small Industry Corporation established in 1965. Since its inception SIDO has, inter alia, undertaken (a) an elaborate regionalisation of the extension system where extension work is undertaken at the regional level by Small Industries Promotion Officers (SIPOs); (b) the development of clusters of industries through the establishment of industrial estates, (c) a national census for small-scale industries, (d) the organisation of the handicraft sector through training and better marketing. SIDO has thus been able to organise artisans in Tanzania with the facilitation of the injection of capital into craft industry thereby alleviating the problems of under-capitalisation of the African artisans.

(a.2) Kenya - The Industrial and Commercial Development Corporation (ICDC)

53. In Kenya, the small- and medium-scale enterprises are assisted by the subsidiary of the Industrial and Commercial Development Corporation (ICDC) known as the Kenya Industrial Estates Ltd. (KIE). Its programme for small- and medium-scale enterprises was established as far back as 1966 and most of the industrial estates established, were in urban centres. Since emphasis had to be shifted to rural industrialization, a subsidiary of the KIE, the Rural Industrial Development Programme, was created to develop rural industrial development centres located in agricultural areas. These centres serve clients through business extension services although there has been tendency to concentrate on craft industries.

(a.3.) Zaire - Office for the Promotion of Zairean Small and Medium Enterprises (OPEZ) and (SOFIDE)

54. The "Office de promotion des petites et moyennes enterprises Zairoises" (OPEZ) was established in 1973 to promote the development of small scale enterprises. Although the terms of reference of OPEZ are very broad, most of its work have been confined to Kinshasa due to lack of funds and adequate professional staff. Its activities for small-scale enterprises had included a survey of these enterprises in Kinshasa and the provision of technical assistance. In addition to OPEZ, Zaire had established SOFIDE as the institution to provide loans to small-scale industries. In practice few loans have been made because prospective entrepreneurs lack suitable collateral and guarantee. In January, 1981 the Government had created an Inter-Ministerial Task Force with the participation of UNIDO, whose major responsibilities are to establish an appropriate definition of SMEs in Zaire, to identify major problems and to make pertinent policy recommendations in order to step up the government's assistance programme for the development of such enterprises.

(a.4) Cameroon - Sous-direction de l'artisanat de l'artisanat et des petites et moyennes entreprises

55. In Cameroon, programmes for small-scale enterprises are designed by the Department of Industry within the Ministry of Economy and Planning and integrated into the National Development Plan. The financing of small-scale enterprises is under the development Bank - la Banque Camerounaise de Developpement (BCD). Further, FOGAPE (Fonds d'aide et de garantie des Credits aux petites et moyennes enterprises) which is part of BCD, undertakes activities in common with commercial banks to assist small-scale enterprises in Cameroon.

(a.5) Botswana - Botswana Enterprises Development Unit (BEDU), Rural Industrial Office, EDF Factory Shells, etc.

56. In Africa, Botswana has perhaps the greatest number of units to develop industries in general and small- and medium-scale enterprises in particular. The Botswana Enterprises Development Unit (BEDU) has been the principal government institution to assist small- and medium-scale enterprises. From its inception BEDU's emphasis was on the establishment of Industrial Estates in major urban areas.

Within six years of its existence around 70 small and medium scale enterprises were established and there has been a refocus on industries located in rural areas through rural industrial extension work. Besides BIDU, other local organisations that provide assistance to small-scale enterprises include: the Rural Industrial Office (RIO), the EDF factory shells, Brigades Development Trust, Rural Industries Innovation Centre, the Botswana Technology Centre, the National Development Bank, etc. Although all these institutions have contributed to the development of SMEs in Botswana there is a need for co-ordination to avoid conflicting policies and interests so that the small and medium scale enterprises can derive maximum benefits from the Government's assistance programme and tighter control over the enterprises to ensure their viability.

(a.6) Mauritius - Small-Scale Industries Unit

57. Prior to 1975, the Government of Mauritius had given the responsibility of promoting and developing small scale industries to the Ministry of Education and Cultural Affairs. In early 1975 this responsibility was transferred to the Ministry of Commerce and Industry where a Small Scale Industries Unit was created with one local economist and two experts. The Unit provides technical, management and economic guidance and assistance to existing and prospective small and medium scale enterprises in collaboration with the Rural Development Unit. About 10 enterprises have benefited from the Government's assistance programme which includes the purchase of machinery and equipment from a loan of 2 million Mauritian Rupees. The Government plans to establish an industrial estate in order to provide better facilities as an incentive to small and medium scale enterprises.

58. The general picture that can be drawn from the above examples is that during the 1970s a number of African Governments had designed programmes for assisting small- and medium-scale enterprises and these have had a certain impact on industrial development in general. However, one feature that needs to be emphasised is the lack of spread effects at the national level due to a high concentration of the enterprises in urban centres to the neglect of the rural areas. As a result many of the programmes for small and medium-scale enterprises in Africa have had little impact in infusing the benefits of industrial development in the rural areas where majority of the population live.

(b) The Development of African SMEs Relative to other Regions

59. In spite of the numerous problems encountered in a comparative analysis of the level of development of small-scale enterprises among developing regions or even among countries of the same region (i.e. definitional, scarcity and accuracy of data, interpretation of parameters such as 'value added', etc.), an attempt has been made in the table below to present some comparative shares of the non-modern industrial subsector in the value added of selected developing countries during the mid-1970s.

60. As can be seen from the table, [illegible] African countries contribute a substantial proportion to total value added of the manufacturing sector as compared to countries in other developing regions. However, care must be taken in interpreting the data because the rankings does not correspond closely to the level of development of these enterprises. A clear feature of the findings is that the more industrialized African countries in the sample have a lower value added by small and medium-scale enterprises which indicates a bias towards large scale establishments as opposed to small-medium scale enterprises in the industrialization strategies of African countries.

Table 3: Ranked share of the top eleven countries in manufacturing value added of selected developing countries

Country	Rank	Year	Share in VA	Threshold size of establishment
Botswana	1	1973	41.4	less than 10
Indonesia	2	1975	37.7	less than 5
Ecuador	3	1975	36.6	less than 7
Iraq	4	1975	28.0	less than 10
Venezuela	5	1974	26.2	less than 5
Bangladesh	6	1975	17.0	less than 10
Tanzania	7	1974	14.4	less than 10
India	8	1974	12.7	less than 10
Philippines	9	1974	12.0	less than 50
Ethiopia	10	1974	10.1	less than 10
Kenya	11	1975	10.0	less than 50
Honduras	12	1971	9.5	less than 5
Tunisia	13	1975	9.3	less than 50
Colombia	14	1975	9.1	less than 10
Turkey	15	1975	10.3	less than 10

Source: "World Industry Since 1960: Progress and Prospects," UN, ID/CONF.3/2 (ID/229).

4.3 Actual contribution of SSIs

(a) Contribution to manufacturing value added

61. The table below [illegible] estimated relative share of small-medium scale enterprises in the total manufacturing value added and in GDP for selected African countries. It can be seen that small- and medium-scale enterprises contribute significantly to the total value added in the manufacturing sector. Out of a sample of 14 countries 4 countries have more value added by small scale enterprises than large-scale industries. Another 4 countries have a share of value added by small- and medium-scale enterprises ranging from 20-50 per cent. Given the fact that the share of manufacturing in total GDP is low for Africa as a whole it is noteworthy that in some countries small

and medium-scale enterprises contribute as much as about 8 per cent to total GDP.

Table 4: Percentage contribution of SMEs in manufacturing and GDP

	Year	Share of MVA in GDP	Share of SMEs in MVA	Share of SMEs in GDP
Central African Republic	1976	12.60	55.9	7.04
Egypt	1976	19.04	35.3	6.72
Ethiopia	1979	10.06	20.3	2.04
Gambia	1978	3.70	52.0	1.92
Ghana	1972	9.62	8.0	0.77
Ivory Coast	1976	13.17	8.9	1.17
Kenya	1980	16.82	16.5	2.78
Madagascar	1976	12.30	47.4	5.83
Malawi	1975	16.56	50.4	8.35
Mauritius	1980	20.25	30.6	6.20
Nigeria	1976	9.43	51.2	4.78
Rwanda	1979	12.34	21.6	2.69
Libya	1976	3.66	37.6	1.38
Somalia	1977	8.30	35.4	2.69
Swaziland	1979	19.11	11.6	2.23
Tunisia	1976	11.90	5.0	0.60

Source: Statistics Division, ECA secretariat

(t) Contribution to manufacturing employment

62. To demonstrate the capacity of SMEs in absorbing a sizable proportion of the active labour force in the manufacturing sector, the table below gives the distribution of employment among small and medium-scale enterprises and large scale industries in selected African countries for the period 1972-1979. As the figures indicate, small and medium scale enterises accounted for an average share of 43 per cent and 63 per cent of manufacturing employment in Egypt and Libya, respectively. Much more striking is that out of 7 countries in the sample, four (Egypt, Kenya, Malawi, Libya) registered average annual growth rate in employment by small and medium-scale enterprises higher than large scale establishments.

Table 5: Distribution of employment in manufacturing in selected African countries (in thousands)

	1972		1973		1974		1975		1976		1977		1978		Average annual growth
	Empl.	%	Empl.	%	Empl	%	Empl.	%	Empl.	%	Empl.	%	Empl.	%	
Egypt															
Large scale industries	671.3	58	694.5	57	711.9	52	737.5	57	760.2		789.1	58	819.1	57	3.8
Small-medium scale ent.	463.3	42	520.5	43	648.3	48	564.4	43	...		569.0	42	612.1	43	4.7
Total manufacturing	1114.6	100	1215.0	100	1360.2	100	301.9	100	...		1358.1	100	1431.2	100	4.3
Ethiopia															
Large-scale industries	53.5	73	55.0	73	57.5	74	60.1	74	59.4	75	62.8	78	66.1	82	3.5
Small-medium scale ent.	20.3	27	20.3	27	20.7	26	21.2	26	20.0	25	18.0	22	15.0	18	-4.5
Total manufacturing	73.8	100	75.3	100	78.2	100	81.3	100	79.4	100	80.8	100	81.1	100	1.6
Kenya															
Large scale industries	94.0	90	95.5	88	96.0	86	97.8	88	110.4	92	123.0	91	122.1	89	4.5
Small-medium scale ent.	10.0	10	13.0	12	15.3	14	129	12	10.0	8	12.9	9	15.0	11	7.0
Total manufacturing	104.0	100	108.5	100	111.3	100	110.7	100	120.4	100	135.9	100	137.1	100	4.7
Malawi															
Large scale industries	23.8	86	25.7	87	25.9	84	28.0	79	27.0	75	30.7	78	32.2	80	5.2
Small-medium scale ent.	4.0	14	4.0	13	4.9	16	7.4	21	9.0	25	8.8	22	8.0	20	12.2
Total manufacturing	27.8	100	29.7	100	30.8	100	35.4	100	36.0	100	39.5	100	40.2	100	6.3
Lybia															
Large scale industries	8.8	38	9.0	35	10.7	36	12.6	38	14.1	37	15.7	38	17.6	37	12.2
Small-medium scale ent.	14.3	62	17.1	65	18.7	64	20.5	62	23.6	63	26.2	62	30.1	63	13.2
Total manufacturing	23.1	100	26.1	100	29.4	100	33.1	10	37.7	100	41.9	100	47.7	100	12.8
Swaziland															
Large scale industries	6.0	80	6.5	77	6.9	81	7.4	74	7.8	85	8.2	87	8.2	85	2.3
Small-medium-scale ent.	1.5	20	1.9	23	1.6	19	2.6	26	1.4	15	1.2	13	1.5	15	0.0
Total manufacturing	7.5	100	8.4	100	8.5	100	10.0	100	9.2	100	9.4	100	9.7	100	4.4
Zimbabwe															
Large scale industries	132.5	92	137.7	92	147.9	92	151.7	91	146.9	90	141.2	91	138.7	93	0.3
Small-medium-scale ent.	12.0	8	11.7	8	13.4	8	14.3	9	16.7	10	13.9	9	10.6	7	-2.1
Total manufacturing	144.5	100	149.4	100	161.3	100	166.0	100	163.6	100	155.1	100	149.3	100	0.5

Source: ECA secretariat, Statistics Division.

4.4 Major constraints to the development of small-scale enterprises in Africa

(a) Economic constraints

63. The development of small-and medium-scale enterprises in Africa have been indirectly but greatly constrained by development policies which had centred around the production of primary commodities for export and establishment of import substitution industries. Most development plans of African countries did not attribute any significant role to small-scale enterprises. Many fiscal, customs and financial measures - especially investment incentives - set minimum levels of initial capital requirement far in excess of the level affordable by the indigenous entrepreneurs. Many of the indigenous small- and medium-scale enterprises that badly needed government assistance were disadvantaged by investment policies which benefitted mainly foreign large industrial and commercial enterprises. This perception of development had been a deterant in the overall development process and in particular, the development of indigenous entrepreneurship and the increased processing of local raw-materials to satisfy domestic requirements.

64. An important external constraint is the market structure in most of the African countries which are characterised by a generally low purchasing power of the population, the high competition with a wide range of imported products and the difficulties of marketing the products of small-scale enterprises. Further, the complexity of market conditions and sales outlets increases the dependence of small scale enterprises on intermediaries for distribution of their products, which reduces the incomes of such enterprises.

65. There is also the problem of the shortage of foreign exchange resources. Generally, most African Governments allocate foreign exchange to large scale projects as opposed to small enterprises. This results in major problems for those small entrepreneurs who require such resources to purchase machinery and equipment and raw material inputs from outside sources. In conjunction with this aspect, there is the absence of strong associations of small entrepreneurs which could enhance their bargaining power to acquire either a sizeable share of available financial resources or enter into joint arrangements for the procurement of raw materials, and also enable them to influence economic policies in their favour, etc.

66. Another obstacle to the progress of small-scale enterprises can be attributed to factors such as internal management and production techniques. Most small entrepreneurs learn the skills of management from the day-to-day operations of their establishments but such an approach is insufficient for the handling of the basic economic, administrative and technical aspects of the management role. With regards to production the manufacturing process is often times modelled on traditional methods and alternative techniques appropriate to the needs of the enterprise are rarely adopted because of lack of financial resources, skills or even the knowledge about the existence of such a technique.

67. The other noticeable constraints which hinder the development of SMEs in Africa include:

- the difficulties of obtaining bank loans because of the high risk associated with such enterprises and the administrative cost to the banks in administering such small loans;

- difficulties to get access to markets and raw materials;

- low pricing policies adopted by African governments encroaches on the the profitability of SMEs;

- inadequate transport and communications facilities

- the lack of appropriate industrial policies for SMEs; etc., etc.

(b) Other non-economic constraints

68. There are also non-economic constraints (i.e Psycho-social and institutional factors) which impede the development and viability of small and medium-scale enterprises. These include:

- the extended family which erodes the possibility of increasing the reinvestible capital which usually goes to support non-productive members of the household;

- the 'demonstration effect' which direct the consumer preference for imported commodities as opposed to the local products of SMEs thereby constricting the market possibilities.

- the lack of co-ordination between government agencies providing assistance in favour of SMEs.

Section 5: Policy measures and recommendations: the role of African Governments in the development of small, medium-scale enterprises

5.1 Integrating SMEs into industrial development plans

69. In most developing African countries, plans and programmes do not internally consider the specific problems of small- medium-scale and rural industries. Most African countries have formulated investment codes offering incentives for the establishment of large scale industrial projects to the detriment of small-scale indigenous industries. A sound industrial development strategy is one that promotes complementarity between large and small industries; that stimulates growth and diversification of industry and accelerates indigenization by easing the transition towards advanced technologies and effective methods of management. Small-medium scale indigenous enterprises need to receive priority attention in the development plans of African countries because of its growth potential, linkage effects and employment generation. Thus, a firm declaration of policy in favour of small-medium-scale business development within the over-all development plan of African Government would be strongly recommended.

5.2 Government sponsored assistance programmes

70. There is a need for well-planned assistance programmes by the African Governments and for co-ordination of the various government services that are offered to small-medium-scale enterprises, particularly in the following areas:

(a) The establishment of industrial estates

71. Several African Governments have already recognized the prime importance of the creation of industrial estates in promoting the development of small-medium-scale enterprises in their respective countries. The location of enterprises within an industrial estate makes it possible to provide them with a number of common services, such as: (1) standard buildings; (2) an advisory bureau which can assist them in choosing equipment, plant layout, selection of raw materials (sources of supply, prices, quality, etc.), (3) maintenance services (mechanical, electrical, etc.) thus avoiding investments which are sometimes costly and difficult to depreciate; (4) other services or supplies (testing and quality control laboratory, water softening, steam supply) thus reducing certain investment which, in many cases, could render unprofitable certain small-scale enterprises which require such utilities in selective small quantitities; (5) energy at the best possible price since the estate would have a sufficiently large capacity to benefit from the best rates (decreasing in proportion to consumption), and (6) social services including possibly literacy centres, etc.

72. In addition to these services, the industrial estates could help establish vocational training centres which enable entrepreneurs to have a sort of nursery of skilled manpower at their disposal. It would also be desirable to set up training institutes or centres on these estates to assist with the establishment of different workshops which will play a dual role in production and training fields. Apart from having the advantage of reducing certain direct and indirect production costs, industrial estates will also help in promoting the decentralization of industries in areas far removed from the large urban centres and in particular from the major cities.

73. It should be noted, however, that the establishment of industrial estates and commercial centres must be preceded by a very thorough preparation of a study of their profitability 12/. The study would include an estimate of investment costs and operating income accruing - rent of industrial premises, taxes paid to the State and other indirect profits, wages paid to workers, etc.

(b) Provision of other government support services

74. Often government give incentives to local industries to protect them from competition from foreign firms. Small-medium-scale enterprises should also be given special incentives so that they can compete with both

12/ See UNIDO, the Effectiveness of Industrial Estates in Developing Countries, United Nations, New York, 1978.

foreign firms and local large industries. Government incentives however, must aim at helping the small firms to become more self reliant and independent in the long run, and should avoid making them overdependent on assistance so that incentives eventually become a form of subsidy. It is, therefore, advisable to make incentive temporary rather than permanent. Among the various types of incentives offered to small-scale enterprises are tax holidays, exemption on import duties, conversion of tax into long-term interest free loans and tariff protection.

75. Small-medium-scale enterprises often import raw materials as well as machinery and equipment for the production of their products. This process of importing is time consuming and the procedures involved can be so tedious and complicated that small-medium-scale enterprises with limited financial and manpower resources often find it difficult to cope with these activities. In addition, small-medium scale enterprises often lack expertise in marketing their products. The Government could, therefore, assist them either by actually buying and selling their products on their behalf or by creating a favourable environment to enable them to do the selling themselves. This strategy involves providing training, guidance, advice and assistance, in import export promotion and marketing. It is thus desirable to set up a government agency with the aim to assist small-medium-scale business in dealing with their specific problems and to co-ordinate their activities with the various government departments.

5.3 Infrastructure support services

(a) Infrastructural facilities

76. Industrial development of any developing country depends not only on direct government programmes such as those enumerated above, but also on supporting services which create the environment necessary for any meaningful industrial activity. The creation of infrastructure should be looked upon as an input necessary for the industrial activity on any reasonable scale. This includes services like transport, power generation and distribution arrangements, communications such as telephones and efficient mail services, banks, storage and warehousing facilities.

(b) Extension services and training centres

77. The managers or owners of the small or medium-scale enterprises often lack experience and education in their respective fields of endeavour and this results, in many instances, in ill-designed and unprofitable ventures. The overall objectives of an extension service is to enable business people to improve their managerial, technical and vocational skills, and to help them analyse their problems themselves and thus develop methods of solving them. The extension officers should be able to identify sources of finance and raw materials as well as market opportunities for the particular commodities, maintain regular contacts with other agencies (like banks) which provide technical and financial assistance to small business.

(c) Other supportive infrastructural services

78. [illegible] small-medium-scale entrepreneurs run into difficulties [illegible] find solutions to their problems partly because they may not be aware of the assistance and services which are available to them. Hence some sort of information centres should be established to collect and disseminate information of interest to small-medium-scale enterprises. The types of information must include [illegible] government policy, rules and regulations concerning small businesses, training programmes offered by various institutions, alternative technology and production processes available locally and export market information, supply of machinery and raw materials, statistics information and government documentation requirements.

5.4 Financial assistance

(a) Domestic financial institutions

79. As was stated above, small-medium-scale enterprises are practically unable to secure funds from commercial financial institutions. Governments can assist in providing subsidized credit through specialized financial intermediary institutions for channelling financial assistance to small-medium-scale enterprises. The practice in Africa is to establish development finance companies, usually with equity shares held by the main intermediary. Also development banks can effectively [illegible] to give loans to small-scale enterprises. African governments can also take up [illegible] of commercial banks to provide technical assistance, but also as the financier of small scale business activities. However experience reveals that such financial channels face many difficulties in both preparing projects and appraising them realistically. Some technical assistance should be given to them on how to carry out their roles of adhering to stringent procedures for loan approval and supervision.

(i) Foreign financial support

80. Since foreign governments and international institutions have manifested interest in providing funds on a bilateral and multilateral basis, for the financing of small-medium-scale business enterprises in Africa. The World Bank loans for small enterprises in Sub-Saharan Africa during the period 1975-1983 amounted to US$51.0 million to 11 countries (Burundi, Cameroon, Comoros, Ethiopia, Gambia, Ivory Coast, Kenya, Lesotho, Madagascar, Mauritius and Niger) 13/. These loans are exclusively designed to support small enterprises. In most cases loans are provided to the development finance institutions which would channel them to small-medium-scale enterprises in their respective countries. The size of these loans range from US$300,000 in Lesotho to US$2,000,000 in Mauritius. The World Bank has also provided industrial credits to the tune of US$15.3 million to Burundi, 13 million to Rwanda, 9.3 million loan to the Development Bank of

13/ Jacob Levitsky "World Banks Lending to Small Enterprises in Sub-Saharan Africa", Washington D.C., June 21-24, 1983.

Comoros; part of which will help finance small-medium-scale enterprises in these countries. For the immediate future, small-medium-scale projects are in advanced stages of preparation for Tanzania ($10 million) and Nigeria ($40 million - $36 million credit line and $4 million for training) and a loan of $12 million to Botswana most of which is for financing small-medium-scale enterprises. The Indian Government is also interested in financing SMEs in Africa on a bilateral basis. African Governments should ensure that such external assistance obtained on a bilateral and multilateral basis be used for the development and promotion of small- and medium-scale enterprises in their respective countries.

5.5 Choice and adaptation of appropriate technology

(a) Definition and advantages of appropriate technology

81. It has long been recognized that the choice of technology and technical change plays a vital role in contributing to the economic development of all nations besides the increase in the supply of resources and improved efficiency in their use 14/. However, the choice of options between intermediate, traditional technology and advanced technology is not clear cut and is not necessarily mutually exclusive. Intermediate technology may be the answer in some small-medium-scale industrial undertakings while advanced technology may have to be used elsewhere. The best mix of the two options has been termed "Appropriate Technology" which is defined as technology that is appropriate to a country's factors of production in that it maximises the use of those factors which are locally plentiful like labour and raw materials in developing countries - while minimizing the use of those which are locally scarce, such as capital and skilled management 15/. Such technologies utilise local and thus accessible raw materials thereby avoiding imports which consume scarce foreign exchanges and employing more labour per unit of scarce investment capital. Developing African countries should therefore choose appropriate technologies, and should only opt for sophisticated technology after a careful and thorough study of alternatives indicates that the latter is appropriate in special circumstances.

(b) Africa's technological capacity

82. As can be seen from the table below Africa is the least technologically developed continent in the world today. The ratio of total stock of scientists and engineers represents about 2.8 per cent and the number of technicians accounts for 3.4 per cent. The number of scientists and engineers engaged effectively in the development and research of technology account for only 2.6 per cent in the world and 12.7 per cent in the developing world total, while the number of technological technicians account for 3.7 per cent and 2 per cent respectively.

14/ A.K.N. Reddy, Technology, Development and the Environment: A Re-appraisal, Un Environment Programme (UNEP), Kenya, 1979.

15/ See Malcolm Harper/Tan. Thiam Soon, Small Enterprises in Developing Countries Case Studies and Conclusions, Intermediate Technology Publications, Ltd., London, 1979.

Table 4: Technological capacity - selected indicators
(averages expressed as medians for 1970 or latest year available)

Science and Technology	Developed market economy countries	Developing countries and territories		
		Africa	Asia	Latin America
Ratio of total stock of scientists and engineers per 10,000 population	112.00	5.80	22.00	69.00
Ratio of technicians per 10,000 population	142.30	8.30	23.40	72.20
Scientists and engineers engaged in R & D per 10,000 population	10.40	0.35	1.60	1.15
Technicians engaged in R&D per 10,000 population	8.20	0.40	0.60	1.40

Source: UNIDO, 1979.

(c) Establishment of technology development centres

83. For a developing African country to introduce and adapt appropriate technology and to achieve rapid industrialization, it is suggested that a technology development centre should be established. Such a centre can be charged with the responsibility of upgrading traditional methods of production, scaling down and redesigning high-cost technology, designing new products, adapting appropriate technology and training of entrepreneurs. To encourage the adaptation and to effect the transfer of technology, it is suggested that (1) foreign machinery and processes should be introduced only after careful and thorough study of the alternatives available; (2) substitution of imported equipment and components by locally made indigenous machines should take place gradually as the technological base of the country expands; (3) innovators and investors should be encouraged to develop and/or adapt appropriate technologies by providing incentives, such as subsidies, income tax rebates, or tax holidays etc.; (4) the use of appropriate technology should be promoted through open-house discussions, industrial clinics and training courses.

5.6 Development of entrepreneurship

84. Entrepreneurial ability is essential to any industrial development process; but entrepreneurial skills are difficult to define and do not necessarily lend themselves to formal education. Some entrepreneurial ability is inherently innate to particular individuals, which can be stimulated in certain circumstances and encouraged by the creation of favourable conditions. In Africa in particular, the entry of Africans into trade and commerce as well as in small-medium-scale

manufacturing enterprises is apparently slow due to the lack of profitable opportunities for investment, lack of sufficient capital and the lack of knowledge and training in business practices 16/. However, individuals with entrepreneurial ability can be taught management skills. Training institutes should provide structured training opportunities for entrepreneurs in combination with the services of well trained extension workers. Such training opportunities and extension services, ideally should be designed to incorporate advice on such aspects as business finance structure, personnel policies, industrial relations, marketing, technology and procurement. There is also a need to develop a class of new young entrepreneurs from among technical graduates and others employed in industry and business and to encourage them financially and technically to set up their own industrial ventures.

85. It is therefore recommended that African Governments should provide the necessary investment climate, training facilities and other technical services to encourage the development of indigenous entrepreneurship that is capable of identifying investment opportunities in areas where small- and medium-scale enterprises are the best options in the industrialization process of African countries.

16/See Peter Marris and Anthony Somerset African Businessmen, Nairobi, East African Publishing House, 1977.